

Aminocyclopyrachlor: A New Active Ingredient for Non-Crop Weed Control

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Aminocyclopyrachlor (hereafter referred to as MAT28) is a new generation synthetic auxin herbicide in the pyrimidine carboxylic acid class of chemistry. It has activity on a wide spectrum of broadleaf weeds and brush with quick uptake and translocation. MAT28 is taken up both through foliage and roots and is active post and pre-emergence. MAT28 is used at low use rates (approximately 0.5 to 4 oz ai/A) and has favorable environmental and toxicity profiles. Products have been and are being developed which combine MAT28 with complementary active ingredients such as chlorsulfuron, metsulfuron, 2,4-D, imazapyr and triclopyr to offer weed control tailored to non-crop and rangeland weed control needs. At the time of this presentation, MAT28 is available in formulated products (Perspective[®], Streamline[®] and Viewpoint[®]) for non-crop weed control only outside of California and is not yet available in California.

Research conducted recently in California and Oregon on brush and tree species has demonstrated the excellent spectrum and efficacy that MAT28 possesses for uses in the utility right-of-way market. This research was done primarily by Mr. Ed Fredrickson (Thunder Road Resources, Redding CA) and included a wide spectrum of brush and tree species and application methods (broadcast, individual plant spray, basal spray, cut stem and hack-and-squirt

A broadcast spray of MAT28 at 4 oz ai/A was effective for control of several brushy species such as bear clover (*Chamaebatia foliolosa*), deerbrush (*Ceanothus integerrimus*), poison oak (*Toxicodendron diversilobum*), whitethorn (*Ceanothus leucodermis*), chamise (*Adenostoma fasciculatum*), buckbrush (*Ceanothus cuneatus*) and French broom (*Genista monspessulana*), but was not effective for control of greenleaf manzanita (*Arctostaphylos patula*) or whiteleaf manzanita (*Arctostaphylos manzanita*).

Individual plant treatment (directed spray) with MAT28 at 16 oz ai/100 gallons of water plus 5% MSO adjuvant increased activity on greenleaf manzanita to 60% control after one year and also provided excellent control of deerbrush, black oak (*Quercus kelloggii*), California hazel (*Corylus cornuta*), bitter cherry (*Prunus emarginata*), whitethorn, snowberry (*Symphoricarpos albus*), gooseberry, madrone (*Arbutus menziesii*), bear clover, poison oak and buckbrush.

Hack and squirt testing was conducted by injecting 0.5 or 1 ml of undiluted 2 lb ai/gallon liquid MAT28 formulation into hacks at one hack per 2, 3 or 4 inch diameter at breast height on big leaf maple (*Acer macrophyllum*) and live oak (*Quercus chrysolepis*). Big leaf maple was very sensitive to MAT28 and rapidly defoliated with complete control at one year after treatment with all hack spacings with the 1 ml per hack rate. Big leaf maple was also completely controlled at 0.5 ml per hack at the 2 and 3 inch hack spacings but control declined at the 4 inch hack spacing. Live oak was less susceptible and the greatest control achieved was approximately

80% with the 1 ml per hack and 3 inch diameter spacing and with both rates at the 2 inch diameter spacing.

Basal trunk application with 10% MAT28 360SL in basal oil resulted in 100% control of live oak and coyote brush (*Baccharis pilularis*).

In conclusion, MAT28 has excellent activity on several brush and tree species commonly encountered in utility right-of-ways including difficult to control species such as live oak and has excellent application method flexibility.